## REMARKS

The preceding amendments and following remarks form a full and complete response to the Office Action dated April 21, 2009. Applicant has amended claims 44, 47-48, 65, 69-70, and 72-75. No new matter has been added by the amendments. Support for the amendments to the claims can be found, *inter alia*, in the Specification at ¶¶ 47-48, 60-62, 86-97, 127-129, 143 and in original claims 10-17, 38, and 64. Applicant previously cancelled claims 1-21, 45, 51-52, and 55-61 without prejudice or disclaimer. Claims 50, 53-54, 66, and 76-77 have been cancelled in the present amendment without prejudice or disclaimer. Claims 22-43 and 62-64 were withdrawn from consideration as a result of an election/restriction requirement. Accordingly, claims 22-44, 46-49, 62-65, and 67-75 remain pending and are submitted for reconsideration.

Applicant's representative wishes to thank Examiners Perry and Kyle for participating in a telephone interview on July 29, 2009. In accordance with the discussion during the interview, Applicant has amended the claims in order to incorporate more detail regarding the determination of relevance the how a recommendation is made, which the Examiners suggested would better distinguish the present invention from the subject matter described by the prior art. Accordingly, Applicant submits that the pending claims are now in condition for allowance.

The Examiner objected to claims 53, 65, and 72 because of several perceived informalities. Specifically, the Examiner objected to the use of a plural word ending in conjunction with a singular article in claim 53, and to claims 65 and 72 because claim 65 recites "one the party" instead of "one of the party." Applicant has cancelled claim 53 rendering the objection to that claim moot. With regard to claims 65 and 72, Applicant

has deleted the offending language from the claims, thereby rendering the objection to those claims moot. Applicant, therefore, respectfully requests the withdrawal of the objection to claims 65 and 72.

The Examiner rejected claims 44-77 under 35 U.S.C. § 112, second paragraph, as allegedly indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. Applicant traverses this rejection on the basis that claims 44, 47-49, 65 and 67-75 (claims 45-46, 50-64, 66, and 76-77 having been either withdrawn or cancelled) distinctly claim the subject matter regarded by the Applicant as his invention and, therefore, comply with 35 U.S.C. § 112, second paragraph.

With regard to claim 44, the Examiner makes the unsupported statement that "third-party data, which represents the bulk off [sic] data on executed transactions, is not available with the identification of the buyer or seller." *See* Office Action at 3. Accordingly, the Examiner concludes that "the party to the transaction of claim 44 must be a very broad interpretation in practice of 'party to the trade' such as exchange on which the security is traded." *Id.* Applicant submits that even if the Examiner's unsupported statement were true, it would not follow that "party to the transaction" must be interpreted as broadly as the Examiner suggests. Indeed, a person of ordinary skill in the art would understand that a party to the transaction to mean a party either buying or selling an object. This interpretation is consistent with the Specification. *See, e.g.*, Specification[1] at ¶¶ 33-43. At any rate, it is black letter law that the breadth of a particular term in a patent claim is of no moment to the definiteness of the patent claims.

[1] Unless otherwise noted, citations to the Specification refer to the U.S. Patent Application Publication No. 2004/0153389, published on August 5, 2004.

*See* MPEP § 2173.04 ("Breadth of a claim is not to be equated with indefiniteness."). Applicant, therefore, submits that the term "party to the transaction" is definite.

The Examiner next takes issue with claim 44's recitation of a "transaction type" for the reason that there are multiple types of transactions. *See* Office Action at 3 ("A settlement is a transaction type, as is a buy order or a transaction for a security in one industry."). The Examiner's interpretation of the term "transaction type," however, is at odds with the explicit reference to transaction types in the specification. In particular, the Specification states:

> Transactions exist in a variety of forms such as trade orders--shorts, buys, sells, holds, puts, calls, informed "no action," etc. These different transaction types can be assessed individually and/or can be integrated as relationships between them are determined by the system.

Specification at ¶ 61 (emphasis added). Thus, a reasonable person of ordinary skill in the art would under understand "transaction type" to refer to shorts, buys, sells, holds, puts, calls, informed "no action," etc., as disclosed by the Specification. Applicant, therefore, submits that the term "transaction type" is definite.

The Examiner next takes issue with the phrase "relating to." While Applicant strongly disagrees with the Examiner's characterization of the phrase "relating to" as indefinite since "relating to" is an extremely common term used in many patent claims[2], in the interest of advancing prosecution, Applicant has amended the claims to delete "relating to." The Examiner's issue with "relating to" is, therefore, moot.

With regard to "the transaction data", this term has antecedent in claim 44's recitation of "receiving historical transaction data." A reasonable person of skill in the

[2] Indeed, a quick search of the PTO's patent database returned 39,579 issued U.S. patents containing the phrase "relating to" in their claims.

art, in reading claim 44, would understand the phrase "the transaction data for each securities transaction…" to refer to the historical transaction data received at the computer, as recited by claim 44.

The Examiner finds the term "price" vague because the price of a transaction "could well be interpreted as the price one pays to execute a transaction, i.e. brokers' fees." Applicant submits that a person of ordinary skill in the art would not confuse the price of an object with the costs relating to a transaction. This viewpoint is bolstered by the Specification, which states, *inter alia*, that "system 100 can be configured to determine how a decision by one investor to sell a stock at $10 is integrated with a decision by another investor to buy that stock at the same price at the same time, adjusting for their differing objectives and the seller's original purchase price." *See* Specification at ¶ 61.

The Examiner asserts that the phrase "based on a measured level of expertise" is vague. *See* Office Action at 4. Applicant, however, asserts that a person of ordinary skill in the art (or anyone else, for that matter) would readily understand the terms "base on" and "measured level of expertise."

It was asserted in the Office Action that the "final limitation leaves open to debate whether it is the recommendation which is relevant to the proposed transaction, or whether it is the transaction data, or the executed transactions." A person of skill in the art, however, would understand that the final limitation of claim 44 to be very clear. One could state the limitation another way: each securities transaction (of the ones that have been determined to be relevant based on at least a measured level of expertise of the

identified party associated with the executed securities transaction), and aggregating the weighted data. Applicant, therefore, submits that this phrase is imminently clear.

The Examiner asserts that "the securities transaction proposal data" lacks proper antecedent. Applicant has amended claim 44 to recite "said data" in lieu of this phrase, thereby rendering the Examiner's assertion moot.

The assertion that the recitation of "a first computer" without recitation of a "second computer" renders the claim indefinite is entirely baseless. There is no requirement that a second or other computer be cited. Furthermore, there is no requirement to specifically state where any particular step is performed. Nevertheless, in the interest of advancing prosecution, Applicant has deleted the term "first" from claim 44, which renders the Examiner's assertion moot.

Though the Office Action is somewhat unclear on this point, the Examiner appears to object to the term "relevant based on at least a measured level of expertise…" recited by claim 44 as lacking definiteness. To support the viewpoint, the Examiner posits a number of questions that have no bearing on whether a claim complies with the requirements of § 112, second paragraph. *See* Office Action at 5 ("why one weights the transactions when the only criterion is apparently one party's expertise (or does the claim mean one finds numerous parties and weights each set of transactions for them? Are the weights different for different securities each person buys? How and why?)."). Applicant submits that the Examiner's trouble with this claim term may stem from a slight misreading of the claim. The claim recites weighting the each of the securities that have determined to be relevant based on the stated criteria.

The meaning is clear. The rationale for doing this, which the Examiner appears to question, is entirely irrelevant to the issue of indefiniteness.

In view of the foregoing, Applicant submits that claim 44 complies with 35 U.S.C. § 112, second paragraph, and is, therefore, definite. Applicant, therefore, respectfully requests the withdrawal of the rejection of claim 44.

The Examiner finds the term "based on a similarity" indefinite because "'[b]ased on, is vague, and how similarity is measured is entirely undefined." *See* Office Action at 5-6. Applicant submits, however, that the term "based on" is well known and not vague[3]. Furthermore, a person of ordinary skill in the art would understand that the term "similarity" would be readily understood in the context of the claims containing the phrase. Namely, the claims state that a recommendation is generated by further weighting each securities transaction based on some factor (*e.g.*, stated characteristics of the transacting party, relative size of the transactions, etc.). One of ordinary skill in the art would readily understand that the comparison is being made between the factor of the executed transactions and the corresponding factor of the proposed transaction and that the weighting is based on the comparison. For example, the similarity in the size of a trade of 100 shares versus a trade for 10,000 shares of a security.

The Examiner found the term "relative demonstrated ability of the party to the executed securities transaction" to be indefinite. Applicant has amended claim 73 to better define the meaning of this term. Specifically, Applicant has amended claim 73 to define that the relative demonstrated ability of the party to the executed securities transaction is "based on at least the number of transactions by the party involving that

[3] A search of the PTO's patent database returned 448,054 issued U.S. patents containing the phrase "based on" in their claims.

security and the gains or losses of the transaction by the party involving that security, greater values being assigned to combinations of the party and security that have greater numbers of transactions and/or greater gains associated with those trans actions, lesser values being assigned to combinations of the party and security that have either lesser numbers of transactions and/or greater losses associated with those transactions, and still lesser values being assigned to combinations of the party and security that have greater numbers of transactions and greater losses associated with those transactions." With regard to the term "competence indicator," which the Examiner finds lacks antecedent basis, Applicant notes that claim 73 recites a method "further comprising a step of generating a competence indicator." *See* Claim 73 (emphasis added). Applicant submits that this claim amendment obviates the Examiner's rejection of claim 73.

With regard to claim 74, the Examiner finds the phrase "indicator indicating relative aggressiveness" to be vague and indefinite. Applicant has amended claim 74 to better define "indicator indicating relative aggressiveness" as being "based on at least one of the size of the transaction relative to the executing party's total investment holdings at the time of transaction, the size of the transaction relative to the executing party's total cash available to invest at the time of transaction, the size of the transaction relative to the executing party's other executed transactions." Applicant also notes that claim 74 has antecedent basis for "confidence indicator" because it recites a method "further comprising a step of generating a confidence indicator." Accordingly, claim 74 is sufficiently definite.

With regard to claim 75, the Examiner objects to "conviction indicator" for lacking antecedent. Applicant has amended claim 75 to recite a method "further comprising a step of generating a conviction indicator." This amendment, therefore, obviates the Examiner's rejection of claim 75.

All of the pending claims distinctly claim the subject matter regarded by the Applicant as his invention and, therefore, comply with 35 U.S.C. § 112, second paragraph. Applicant, therefore, respectfully requests the withdrawal of the rejection of claims 44, 47-49, 65 and 67-75.

The Examiner rejected claims 44, 50, 66, 70, 71, 73-75, and 77 under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 5,101,353 to Lupien et al. ("Lupien") in view of U.S. Patent No. 6,317,728 to Kane ("Kane"). Applicant traverses the rejection on the basis that claims 44, 70, 71, and 73-75 (claims 50, 66, and 77 having been cancelled) recite subject matter neither disclosed nor suggested by the combination of Lupien and Kane.

Claim 44 recites a computer-implemented method for generating a securities transaction recommendation. The method comprises the steps of receiving historical transaction data for a plurality of executed securities transactions over an electronic data network at a computer. The transaction data for each executed securities transaction includes (e.g., as data fields) security name, price of the security, total number of shares of the securities transaction, a type of the securities transaction, and an identification of the party to the securities transaction and the characteristics of that party. The method further includes receiving data for a proposed securities transaction, the data including security name, price, total number of shares, transaction type,

industry of the security, identification of the party proposing the proposed securities transaction, and characteristics of that party. According to the method, it is then determined which executed securities transactions of the historical transaction data are relevant to the proposed securities transaction. The relevance is determined by a match between one or more data elements of the executed securities transaction and corresponding data elements of the proposed securities transaction. A recommendation is then generated. The recommendation relates to the proposed securities transaction and is based on the transaction data of the executed securities transactions that have been determined to be relevant to the proposed securities transaction. The recommendation is generated by weighting each securities transaction of the securities transactions determined to be relevant (based on at least a measured level of expertise of the identified party associated with the executed transaction), and aggregating the weighted data.

Lupien relates to an automated securities and portfolio management system for use by investment managers of large portfolios. *See* Lupien at Abstract. The system is designed to increase liquidity by looking for more optimal fits between existing or intended buy and sell orders. *See, e.g.*, *Id.* at col. 2, line 60 – col. 3, line 14. Lupien, however, fails to disclose or suggest each and every feature of claim 44.

For instance, Lupien fails to disclose or suggest a step for determining which executed securities transactions of the transaction data are relevant to the proposed securities transaction due to matches between one or more data elements of the executed securities transaction and the corresponding data elements of the proposed securities transaction, as required by claim 44. The Examiner asserts that Lupien

discloses updating "market data, portfolio holdings, including cash, and recalculate[ing] purchase and sale orders in all relevant securities." *See* Lupien at col. 4, lines 34-36; Office Action at 10. Apart from the use of the word "relevant," the cited passage of Lupien cited by the Examiner has nothing to do with the concept of determining what executed securities transactions are relevant to a proposed transaction.

First, Lupien makes no disclosure relating to determining which securities transactions are relevant. It merely notes that some securities (not the same as securities transactions) are relevant.

Second, Lupien's "relevant securities" are not relevant to a "proposed securities transaction" but are simply securities for which market data has changed as a result of orders being executed. Lupien makes no mention of a proposed securities transaction.

Thus, Lupien fails to disclose or suggest "determining which executed securities transactions of said transaction data are relevant to said proposed securities transaction," as required by claim 44. Claim 44 is, therefore, patentable over Lupien for this reason alone.

Claim 44, however, is patentable over Lupien for the separate and independent reason that Lupien fails to disclose determining relevance due to matches between one or more data elements of the executed securities transaction and the corresponding data elements of the proposed securities transaction, as required by claim 44. Again, to Lupien, a "relevant" security is a security with market data that needs to be updated – no consideration is given to exact matches or similarities between one or more data elements of an executed securities transaction and the corresponding data elements of

a proposed transaction. For this separate and independent reason, claim 44 is patentable over Lupien.

Claim 44 is also patentable over Lupien because, as the Examiner correctly notes, Lupien fails to disclose or suggest generating a recommendation relating to the proposed securities transaction based on the transaction data of the executed securities transactions determined to be relevant to the proposed securities transaction, wherein the recommendation is generated by weighting each securities transaction or the securities transactions determined to be relevant based on at least a measured level of expertise of the identified party associated with the executed securities transaction, as required by claim 44. *See* Office Action at 10. The Examiner, however, alleges that Kane remedies the deficiencies of Lupien with respect to claim 44. It does not.

Kane relates to a securities trading system based on the principals of artificial intelligence. *See* Kane at Abstract. In particular, the system includes one or more software modules called decision agents, each of which represents a respective buy/sell rule. *Id.* at col. 2, line 64 – col. 3, line 2. Each of the agents makes a recommendation as to the disposition of a certain security and a "vote" is taken of all the decisions of the respective agents. *Id*. at col. 5, lines 45-49. The result of the vote is transmitted via a data channel and the decision is executed in executing device 11, which transmits a corresponding order via an appropriate data channel. *Id.* After each trade, a corresponding adjustment in value takes place for a respective security or commodity in the current memory. Each agent has its respective "score" adjusted either positive or negative as a result of the adjustment in value. As times goes by, these virtual agents

accumulate higher scores, which leads to increased "voting power" as a result of making better decisions. *Id.* at col. 5, line 58 – col. 6, line 4.

Applicant first notes that Kane entirely fails to disclose or suggest determining which executed securities transactions of the transaction data are relevant to the proposed securities transaction due to matches between one or more data elements of the executed securities transaction and the corresponding data elements of the proposed securities transaction, as required by claim 44. Indeed, the Examiner does not even allege that this feature is disclosed by Kane. Applicant, furthermore, can find no disclosure of Kane that is at all relevant to this feature of claim 44. Thus, Kane cannot cure the deficiencies of Lupien with respect to this element of claim 44. The combination of Lupien and Kane, therefore, fails to disclose or suggest the determining step of claim 44. For this reason alone, the rejection of claim 44 is improper and should be withdrawn.

Applicant next notes that Kane fails to disclose determining relevance based on a measured level of expertise of an identified party. The Examiner appears to equate the decision agents disclosed by Kane to the "identified party" recited by claim 44. Such reasoning, however, is not correct. At best, it is Kane's executing device 11 and not the agents that is the identified party because an identified party is an entity that exercises a transaction. *See, e.g.*, Specification at ¶ 48. In this case, Kane's agents are not users; they do not actually make trades. Rather, they are merely part of the decision making logic.

Consequently, Kane fails to disclose or suggest securities transactions determined to be relevant based on a measured level of expertise, as required by claim

44. Indeed, Kane does not teach determining the relevant transactions at all. Instead, Kane discloses merely altering a score of an agent based on whether its position was correct or not. Altering an agent's score based on correctness, however, is not the same as determining relevance based on a measured level of expertise. As stated in the specification, expertise is "an indicator used here to describe the invention's aggregate assessment of one or more users' relative demonstrated ability associated with one or more transactions." Specification at ¶ 38. An agent is not a user and an agent's score is not the same as an aggregate assessment of one or more users' relative demonstrated ability associated with one or more transactions.

Thus, in addition to failing to disclose or suggest the determining step of claim 44, the combination of Lupien and Kane fails to disclose or suggest generating a recommendation where the recommendation is generated by weighting each securities transaction of said securities transactions determined to be relevant based on at least a measured level of expertise of the identified party associated with the executed securities transaction, as required by claim 44.

Since Lupien and Kane fail to disclose or suggest each and every feature of claim 44, Applicant respectfully requests withdrawal of the rejection of claim 44. Claims 70, 71, and 73-75 are patentable over Lupien and Kane for at least the same reasons stated above with respect to claim 44, from which they depend, as well as for the additional features they recite. Applicant, therefore, respectfully requests withdrawal of the rejection of claims 70, 71, and 73-75 as well.

The Examiner rejected claims 46, 49, 53, 54, 62, 65, 69, and 72 under 35 U.S.C. § 103(a) as obvious over the combination of Lupien and Kane in view of U.S. Patent No.

6,401,080 to Bigus. Applicant traverses the rejection on the basis that claims 49, 65, 69, and 72 (claims 53 and 54 having been cancelled and 62 having been withdrawn) recite subject matter neither disclosed nor suggested by the combination of Lupien, Kane, and Bigus.

For instance, claims 46, 49, 65, 69, and 72 are patentable over the combination of Lupien and Kane for at least the same reasons stated above with respect to claim 44, from which they depend. Bigus, which the examiner cites for its purported disclosure of various kinds of weighting, fails to remedy the deficiencies of Lupien and Kane with respect to claim 44 (and therefore with respect to claims 49, 65, 69, and 72). For this reason alone, the rejection of claims 46, 49, 65, 69, and 72 is improper and should be withdrawn.

Claims 46, 49, 65, 69, and 72, however, are also patentable for the additional reason that Bigus, in addition to its failure to remedy the deficiencies of Lupien and Kane, fails to disclose or suggest the additional features recited by claims 46, 49, 65, 69, and 72. For instance, with regard to claim 49, Bigus fails to disclose or suggest weighting each securities transaction of said relevant executed securities transactions based on a recency of the executed securities transaction relative to the proposed transaction, as required by claim 49. Bigus discloses an automated negotiating system that is concerned with 'reliable value determination" for potential transactions. *See* Bigus at col. 4, lines 24 – 40. To that end, Bigus discloses monitoring market pricing at any single point in time, but does not measure or otherwise asses the success of investments (i.e., events that occur over time). Accordingly, Bigus would be incapable of determining "recency" of an event that has multiple points in time associated with it

(e.g., beginning and an end). Thus, Bigus fails to disclose this feature of claim 49. Claim 49 is, therefore, patentable for this additional reason.

With regard to claim 65, Bigus fails to disclose generating a recommendation by weighting each securities transaction of said relevant executed securities based on a similarity of the stated characteristics of the party of the executed securities transaction, as required by claim 65. Bigus does not disclose the gathering of stated characteristics of parties associated with the executed and proposed transactions and so, is incapable of weighting inputs to the recommendation based on a degree of similarity between the characteristics of the parties of the executed transactions and a proposed transaction.

Thus claims 46, 49, 65, 69, and 72 are patentable over the combination of Lupien, Kane, and Bigus for the additional features they recite. Applicant, therefore, respectfully requests the withdrawal of the rejection of claims 49, 65, 69, and 72.

The Examiner rejected claims 47 and 66 under 35 U.S.C. § 103(a) as unpatentable over the combination of Lupien, Kane, and U.S. Patent Application Publication No. 2003/0093352 by Muralidhar et al. ("Muralidhar"). Applicant traverses the rejection on the basis that claim 47 (claim 66 having been cancelled) recites subject matter neither disclosed nor suggested by the combination of Lupien, Kane, and Muralidhar.

For instance, claim 47 is patentable over the combination of Lupien and Kane for at least the same reasons stated above with respect to claim 44, from which it depend. Muralidhar, which the Examiner cites for its purported disclosure of weighting by trade size, fails to remedy the deficiencies stated above with respect to claim 44 (and

therefore with respect to claim 47). For this reason alone, the rejection of claim 47 is improper and should be withdrawn.

Claim 47, however, is also patentable over the combination of Lupien, Kane, and Muralidhar for the additional features it recites. Namely, Muralidhar fails to disclose generating a recommendation by further weighting each securities transaction of said relevant executed securities transactions based on a similarity of the relative size of the executed securities transactions size to the relative size of the proposed transaction, as required by claim 47. Indeed, like Lupien and Kane, Muralidhar does not evaluate executed transactions, but, rather, uses a series of investment rules. *See, e.g.*, Muralidhar at ¶ 24. Accordingly, Muralidhar is incapable of weighting inputs to the recommendation based on a degree of similarity between the executed transactions and a proposed transaction. Furthermore, while Muralidhar does describe weighting different rules, it says nothing about using trade size to calculate the weighting "coefficient." Consequently Muralidhar fails to remedy the deficiencies of Lupien and Kane with respect to claim 47. Applicant, therefore, respectfully requests the withdrawal of the rejection of claims 47.

The Examiner rejected claim 48 under 35 U.S.C. § 103(a) as unpatentable over the combination of Lupien and Kane in further view of U.S. Patent Application Publication No. 2002/0059126 by Ricciardi ("Ricciardi"). Applicant traverses the rejection on the basis that claim 48 recites subject matter neither disclosed nor suggested by the combination of Lupien, Kane, and Ricciardi.

For instance, claim 48 is patentable over the combination of Lupien and Kane for at least the same reasons stated above with respect to claim 44, from which it depends.

Ricciardi, which the Examiner cites for its purported disclosure of weighting by industry, fails to remedy the deficiencies identified above with respect to claim 44 (and therefore to claim 48). Accordingly, claim 48 is patentable over the combination of Lupien, Kane, and Ricciardi for this reason alone.

Claim 48, however, is patentable for the separate and independent reason that the combination of Lupien, Kane, and Ricciardi fails to disclose or suggest generating a recommendation by weighting each securities transaction of the relevant executed securities transactions based on a similarity of the company represented by the equity of the executed securities transaction to the company represented by the equity of the proposed transaction, as required by claim 48. Ricciardi does not evaluate executed transactions, but rather, uses a series of theoretical strategies. Accordingly, it does not (nor would it need to) weight inputs to the recommendation based on a degree of similarity between the executed transactions and a proposed transaction. Claim 48 is, thus, patentable for this separate and independent reason. Applicant, therefore, respectfully requests the withdrawal of the rejection of claim 48.

## CONCLUSION

In view of the foregoing amendments and arguments, claims 44, 46-49, 65 and 67-75 are in condition for allowance. Applicant, therefore, respectfully requests that the Office allow claims 44, 46-49, 65 and 67-75 and pass the application to issue.

In the event that this paper is not timely filed, the Applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account No. 02-2135.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the Applicant's undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

Respectfully submitted,

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